Table 3: Antibacterial activity of fresh haemolymph of mites, *T.grandissimum* against pathogenic bacteria in Disc plate method.

Organisms	Name	Zone of inhibition (mm) (± S.D) Concentration of hemolymph (mg/disc)			Standard antibiotics Ciprofloxacin
		100	150	200	40µg/ml
Gram Positive Organism	*S. aureus*	4.2 ±0.2	4.6 ± 0.2	7.2 ± 0.3	14.3
	S. pneuomoniae	4.6 ± 0.2	5.6 ± 0.3	8.1 ± 0.2	16.5
	C. diptheriae	4.2 ± 0.3	5.7 ± 0.1	7.2 ± 0.3	16.4
	B. cereus	3.6 ± 0.2	5.2 ± 0.2	8.3 ± 0.2	18.4
Gram Negative Organism	*C. tetani*	5.2 ± 0.1	6.6 ± 0.1	8.6 ± 0.1	19.3
	E. coli	5.2 ± 0.1	6.2 ± 0.2	7.6 ± 0.2	16.6
	S. typhi	6.2 ± 0.2	6.6 ± 0.1	8.4 ± 0.2	19.4
	A. hydrophila	3.3 ± 0.1	6.2 ± 0.3	8.3 ± 0.3	26.3
	K. pneuomoniae	4.2 ± 0.3	5.2 ± 0.2	7.4 ± 0.1	25.4
	P. aerugenosa	3.2 ± 0.2	4.2 ± 0.1	6.7 ± 0.3	24.1

after the aqueous solvent was evaporated, the discs were placed on the Petri plate previously seeded with the respective bacterial strains. Three replicates were used for each treatment. Control discs were kept without any extracts but soaked in respective microlitre of aqueous solvent and dried plates were then kept at 37^0 C in an incubator for 24hrs. The inhibition – zone width (distance from the edge of the paper disc to the outer edge of the inhibition zone) was measured to the nearest mm, at 24hrs by using Hi-Media antibiotic zone scale and expressed in standard deviation of mean (± SE).

Results and Discussion:

Antibacterial activity: Results on the antibacterial activity of various extracts of red velvet mite are presented in the Tables 1 –3. The haemolymph, outer skin and whole body extracts of the red velvet mite showed a good antibacterial activity. Of the three tissues tested, antibacterial activity was more pronounced in fresh haemolymph. Next to haemolymph, the whole body extracts showed a good antibacterial activity. Of the different bacteria tested antibacterial activity was well expressed against S. *typhi and C. tetani*. The haemolymph showed less activity against (6.7 ± 0.3 mm) *P.aeruginosa*. The whole body extract (200 mg /disc) showed a high inhibitory action against *A. hydrophila* (8.1 ± 0.3 mm) and minimum effect on *S.aureus* (5.6±0.2mm). The extracts of the skin registered a maximum activity against *P. aeruginosa* (7.2 ± 0.1 mm) and minimum activity against *C. tetani* (3.6 ± 0.1)

It is widely accepted that plants, animals and their by-products used as a source of folk or traditional medicines indicate the presence of a biologically active constituent(s) in them. A significant portion of the currently available non-synthetic and/or semi-synthetic pharmaceuticals in clinical use is comprised of drugs derived from plants, animal, microbial, and mineral products [12]. However many animals have been methodically tested by pharmaceutical companies as sources of drugs to the modern medical science [13]. Approximately 109 animals and their 270 uses are reported in folk medicine in different part of India. The number of animals reported for medicinal purposes in different parts of India is enough to feel a need to discuss on the use of animals and their products, as medicines. In order to stress how important animals were, are and can be as sources of pharmacological substances and discussion

on the use of the animals and their products, as medicines in conservation biology and sustainable use. We have concluded red velvet mites also one of the important zoo therapeutic agent for modern medicines. The antibacterial potential in the haemolymph and whole body extracts of Red velvet mite suggests that the mite possess antibacterial compounds and this has to be explored in future.

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